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LUBRICATING OIL COMPOSITION**Publication number:** JP2000063866**Publication date:** 2000-02-29**Inventor:** BABA ZENJI; HANIYUDA KIYOSHI**Applicant:** SHOWA SHELL SEKIYU**Classification:**

- International: **C10M133/16; C10M137/08; C10M137/10; C10M141/10;**
C10N; C10N20/00; C10N20/02; C10N30/00; C10N30/06;
C10N30/08; C10N30/12; C10N40/02; C10N40/04;
C10N40/08; C10N40/12; C10N40/30; C10M133/00;
C10M; C10M137/00; C10M141/00; (IPC1-7):
C10M141/10; C10M133/16; C10M137/08; C10M137/10;
C10N20/00; C10N20/02; C10N30/00; C10N30/06;
C10N30/08; C10N30/12; C10N40/02; C10N40/04;
C10N40/08; C10N40/12; C10N40/30

- European:**Application number:** JP19980234758 19980820**Priority number(s):** JP19980234758 19980820**Report a data error here****Abstract of JP2000063866**

PROBLEM TO BE SOLVED: To obtain a composition being excellent in thermal oxidation stability, lubricating properties, water resistance filtration characteristics in the aspect of environment, safety and practicality and having the lowest possible ash such as zinc by mixing a base oil with an abrasion-proofing agent comprising phosphorothionate, an acid phosphoric ester, and a trialkyl dithiophosphate, and a rust preventive comprising a polyalkylenepolyamide. **SOLUTION:** An abrasion-proofing agent comprises a phosphorothionate selected among trialkyl phosphorothionates represented by formula I: $S=P(-O-R_1)_3$ (wherein R_1 is a 4-18C saturated alkyl or the like), etc., and an acid phosphoric ester amine salt represented by formula: $[X=P(-XR_2)_2XH].[N(R_3R_4R_5)]$ (wherein X is S or O; R_2 is a 2-30C alkyl; R_3 is a 1-30C alkyl; and R_4 and R_5 are each H, a 1-30C alkyl or the like), and a trialkyl dithiophosphate. The rust preventive is the reaction product of a polyalkylenepolyamine represented by formula III: $H_2N-(R_{10}-NH)_mH$ (wherein R_{10} is a 2-4C alkylene; and m is 2-6) with a monocarboxylic acid.

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